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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Jialin SHEN

Appln. No.: 09/870,286

Group Art Unit: 1755

Filed: May 30, 2001

For: MATERIAL SYSTEM FOR USE IN THREE DIMENSIONAL PRINTING

Attorney Docket No.: 3926.029

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §1.97 and §1.98

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AUG 23 2001

TC 1700

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 C.F.R. §1.56, Applicants hereby notify the U.S. Patent and Trademark Office of the following documents for the above-identified application. Copies of the documents set forth below and listed on the attached Form PTO-1449 are provided herewith.

1. German Patent Application No. DE 198 48 896 A1 (in German)
2. U.S. Patent No. US 6,143,852
3. PCT Patent Application No. WO 97/31782 A1 (in French)
4. PCT Patent Application No. WO 99/47252 A1 (in German)
5. U.S. Patent No. US 5,885,338

The present Information Disclosure Statement is being filed
(1) no later than three months from the application's filing date, or (2) before the mailing date of the first Office Action

on the merits and, therefore, no Certification Under 37 C.F.R. §1.97(e) or fee under 37 C.F.R. §1.17(p) is required.

The relevance of the non-English references is explained below.

Document 1

German Patent Application No. DE 198 48 896 A1 (Harrison and Podszun) entitled "Copolymerisate für Rapid Prototyping", published April 27, 2000.

Document 1 was cited in a search report by the German Patent and Trademarks Office in the examination proceeding of a corresponding German patent application. A member of the same patent family is US patent No. US 6,143,852 (= Document 2, *infra*).

Relevant passages are (1) on page 2, lines 3 to 5, and (2) claim 2, translations as follows:

(1)

The invention relates to spherical methyl methacrylate copolymers with an average particle size of 6 to 50 μm and a narrow particle size distribution and to a method of producing them. The invention further relates the use of such spherical copolymers for the production of 3D models by laser sintering.

(2)

Method for production of methyl methacrylate copolymers of claim 1, characterized in that a monomer mixture comprising

- a) 90 to 50 % w/w of methyl methacrylate, and
 - b) 10 to 50 % w/w of at least one C2-C10 -alkyl methacrylate
- is polymerized by dispersion polymerization using an initiator.

Document 1 does not disclose a material system useful for 3D printing. By combining the materials as described in claim 2 of the above document, only micrometer-sized particles are formed. In contrast to this, the material system disclosed in the present application allows production of macroscopic parts.

Furthermore, the copolymers of Document 1 are attached to one another by applying energy (laser irradiation), whereas in 3D printing of the present invention, liquid material is supplied (solvent). Liquid components would obstruct laser sintering as employed by Document 1.

Applicants therefore consider this document not to be relevant.

Document 3

PCT Application No. WO 97/31782 (Dal'Molin, Maitre and Vovelle) entitled "Films pour impression par jet d'encre", published September 4, 1997.

Applicants are not aware of any English language document corresponding to Document 3.

Relevant passages are (1) claim 1 and (2) claim 17, translation as follows:

(1)

Films useful for imprinting by ink jet printers, comprising a film support of polyester, which carries on at least one of its faces a surface layer for receiving the print, characterized in that said surface comprises:

- a gelatine-type polyamine-polyacid and
- a hydrodispersible copolyester comprising sulfonyloxy or latex motifs soluble in water or alkali.

(2)

Method for producing a film of claims 1 to 16, characterized in that it consists of coating one or both faces of the support film by an aqueous solution or dispersion comprising gelatine and the hydrodispersible polyester and/or the water or alkali soluble latex and, preferably, the coating of only one face of the support film.

The films disclosed by Document 3 obviously cannot be used in 3D printing. Applicants therefore consider this document not to be relevant.

Document 4

PCT Patent Application No. WO 99/47252 A1 (Donath, Sukhorukov, Lerche, Voigt, Bäumlér, Caruso and Möhwald) entitled "Herstellung von Nano- und Mikrokapseln durch schichtweise Polyelektrolyt-Selbstassemblierung", published September 23, 1999. Applicants are not aware of any English language document corresponding to Document 4.

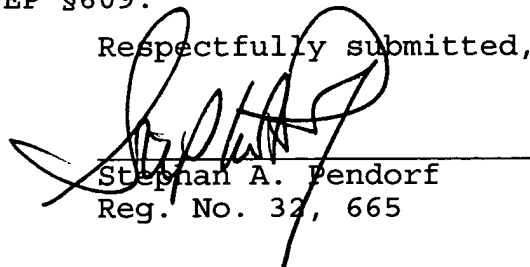
Document 4 relates to Microcapsules with a polyelectrolyte coating and a particle diameter of 10 μm or more (page 4, lines 4, 5). Coating is achieved by layer-wise self-assembly of the polyelectrolytes.

This document does not disclose any hint towards use of polyelectrolytes in 3D printing. For example, it does not mention a binder or a solvent for the binder. Applicants therefore consider this document not to be relevant.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedated or otherwise remove any listed document as a competent reference against the claims of the present application.

Applicant respectfully requests that the listed documents be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

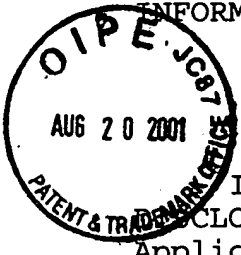
Respectfully submitted,



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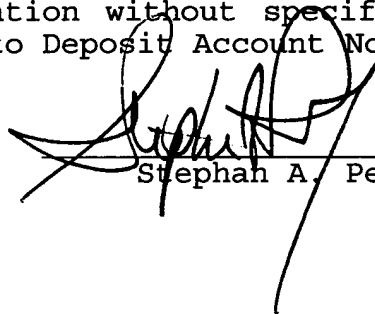
Dated: August 16, 2001



CERTIFICATE OF MAILING AND AUTHORIZATION TO CHARGE

I hereby certify that a copy of the foregoing INFORMATION DISCLOSURE STATEMENT, Form PTO-1449 and five references for U.S. Application No. 09/870,286 filed May 30, 2001, was deposited in first class U.S. mail, postage prepaid, addressed: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on August 16, 2001.

The Commissioner is hereby authorized to charge any additional fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account No. 16-0877.


Stephan A. Pendorf

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INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.

3926.029

SERIAL NO.

09/870,286

Jialin SHEN

FILING

May 30, 2001

GROUP

1755

AUG 20 2001

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,143,852	11/7/00	Harrison, et al.	C08F	220/10	
	5,885,338	3/23/99	Nigam, et al.	C09D	11/02	

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FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	DE 198 48 896 A1	04/27/00	Germany	C08F	220/18		✓
	WO 97/31782	09/04/97	World	B41M	5/00		✓
	WO 99/47252	09/23/99	World	B01J	13/00		✓

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.